

Green File

Qualified solenoid valves for various NPP applications inside and outside of the containment. The installation and maintenance of the Green File valves are simple and efficient.

- ▶ **More than 10,000 solenoid valves in operation since 1994**
- ▶ **No reported malfunction in 200,000 valve-years of continuous energized operation**
- ▶ **All Green File solenoid valves are of modular flanged design, mounted on base plates / manifolds which allow for quick disconnection**

Seitz provides spare parts, replacement solenoids and maintenance services for all Green File valves.

Specification NP1 valve type

Valve types NP1	
Operating system	Direct or pilot operated with system media or auxiliary fluid
Function	2-way, 3-way, 5-way, and others NC or NO (where applicable); redundant valve block combinations
Fluid	Air / Nitrogen
Nominal diameter	From 2.2 to 25 mm (0.09 to 1 in)
Flow coefficient Kv (Cv)	0.15 to 11.1 (0.17 to 12.9)
Response time	Max. 50 ms
Ambient temperature	Normal operation: max. 55°C (131°F) Extreme operation: max. 90°C (194°F) for 8h
Pressure range	0 to 12 bar (0 to 174 psig)
Leakage	Max. 0.12 NI/h (2 scc/min)
Connection type	Thread-connection or flange
Weight	From 0.2 to approx. 8 kg (0.44 to 17.6 lbs)
Material	Body: Aluminum Ti-anodized (Stainless Steel on request) Elastomers: FKM

Qualifications NP1 valve type

Safety class	1E
Seismic category	I
Qualified lifetime	20 years
Qualification and design bases	IEC 68-2-6; IEC 68-2-30; IEEE 323-1974; IEEE 382-1980; IEEE 344-1975; EPRI NP-1558 Sept 1980

Harsh environment NP1 valve type

DBE-conditions	181 °C (358°F)
Radiation	2 × 10 ⁶ rad

NPP references

Barsebäck 1 & 2	Sweden
Beznau 1 & 2	Switzerland
Forsmark 1, 2 & 3	Sweden
Loviisa 1 & 2	Finland
Olkiluoto 1, 2 & 3	Finland
Oskarshamn 1, 2 & 3	Sweden
Ringhals 1, 2, 3 & 4	Sweden



Specifications

Valve types DBE	
Operating system	Direct or pilot operated with system media or auxiliary fluid
Function	2-way, 3-way, 5-way, and others NC or NO (where applicable); redundant valve block combinations, remote controlled and quick exhausting valves
Fluid	Air / Nitrogen
Nominal diameter	10 to 25 mm (0.4 to 1 in)
Flow coefficient Kv (Cv)	2.3 to 11.1 (2.7 to 12.9)
Response time	Max. 50 ms
Ambient temperature	Normal operation: max. 55°C (131°F) Extreme operation: max. 90°C (194°F) for 8 h
Pressure range	0 to 30 bar (0 to 435 psig)
Leakage	Max. 0.12 NI/h (2 scc/min)
Connection type	Threaded connection or flange
Weight	From 0.2 to approx. 8 kg (0.44 to 17.6 lbs)
Material	Body: Aluminum Ti-anodized (Stainless Steel on request) Elastomers: FKM

Qualifications DBE valve type

Safety class	1E
Seismic category	I
Qualified lifetime	20 years
Qualification and design bases	IEC 68-2-6; IEC 68-2-30; IEEE 323-1974; IEEE 382-1980; IEEE 311-1975; EPRI NP-1558 Sept 1980

Harsh environment DBE valve type

DBE-conditions	181 °C (358 °F)
Radiation	2 × 10 ⁶ rad

Specifications

Valve types HPN	
Operating system	Direct or pilot operated with system media or auxiliary fluid
Function	2-way, 3-way, 5-way, and others NC or NO (where applicable); redundant valve block combinations
Fluid	Air / Nitrogen
Nominal diameter	10 to 16 mm (0.4 to 0.63 in)
Flow coefficient Kv (Cv)	2.3 to 4.5 (2.7 to 5.23)
Response time	Max. 50 ms
Ambient temperature	Normal operation: max. 55°C (131°F) Extreme operation: max. 90°C (194°F) for 8h
Pressure range	2 to 32 bar (29 to 464 psig)
Leakage	Max. 0.12 NI/h (2 scc/min)
Connection type	Thread-connection or flange
Weight	From 0.2 to approx. 8 kg (0.44 to 17.6 lbs)
Material	Body: Aluminum Ti-anodized (Stainless Steel on request) Elastomers: FKM

Qualifications HPN valve type

Safety class	1E
Seismic category	I
Qualified lifetime	20 years
Qualification and design bases	IEC 68-2-6; IEC 68-2-30; IEEE 323-1974; IEEE 382-1980; IEEE 344-1975; EPRI NP-1558 Sept 1980

Harsh environment HPN valve type

DBE-conditions	181 °C (358 °F)
Radiation	2 × 10 ⁶ rad



With actuator 6A39 (with Cannon connector)



With actuator 2A25



Green File redundant combination for piloting of MSIV and SRV

Specifications

Solenoid type 6A39 (NUREG-0588 Cat. 1)	
Rated voltage	105 to 140 V DC; normal 125 V DC
Tolerance	+10% / -10%
Rated power	22 W
Ingress degree	IP 68 up to 4 bar (58 psig) (NEMA 6P)
Weight	0.820 kg (1.8 lbs)

Harsh environment qualification

Temperature	179 °C (355 °F)
Radiation	8.25 × 10 ⁷ rad

Solenoid type 2A25	
Rated voltage	12 to 250 V DC
Tolerance	+10% / -15% (typical)
Rated power	12 W
Ingress degree	IP 54 (typical); higher IP classes available (NEMA 3/3S)
Weight	0.510 kg (1.12 lbs)

Harsh environment qualification

Temperature	173 °C (343 °F)
Radiation	5 × 10 ⁶ rad

Solenoid type 6A59	
Rated voltage	12 to 250 V DC
Tolerance	+10% / -15% (typical)
Rated power	25 W
Ingress degree	IP 67 (NEMA 6/6P)
Weight	Approx. 0.8 kg (1.76 lbs)

Harsh environment qualification

Temperature	180 °C (356 °F)
Radiation	2.1 × 10 ⁷ rad



EXCELLENT
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